

Amendments to the Claims

Please cancel Claim 7 without prejudice. Please amend Claims 1, 2, 5, 11-14, 16 and 17.

1. (Currently Amended) A blood vessel-catheter for insertion through a patient's vascular system, comprising:

- a) a catheter tube and a bolus molded of resilient plastic;
- b) said catheter tube including a body having a cylindrical wall through which a lumen extends to a distal end of the tube;
- c) said bolus including a body having a connector section joined to said catheter tube at said distal end on the longitudinal axis of said body, a passage section and a nose section;
- d) said nose section having a longitudinal axis and an unperforated, rounded bullet nose on its longitudinal axis, said longitudinal axis of said nose section extending through said rounded, bullet nose at its tip;
- e) said passage section of said bolus containing an axially extending passage communicating at one end with said tube lumen and at another end with a port opening radially through the side of said passage section;
- f) said nose section being joined to said passage section at the forward end of said port and in such a manner that the longitudinal axis of said nose section extends to one side of the longitudinal axis of said passage section, said nose section having a maximum thickness on a plane perpendicular to its longitudinal axis which is smaller than the outside diameter of the tube.

2. (Previously Amended) The catheter of Claim 1 further characterized in that:

- a) said nose section, where it joins said passage section, has a center which is radially offset from the longitudinal axis of said body so that a portion of the outer periphery of said nose section is substantially tangent with an imaginary cylinder projected forwardly from the cylindrical outer surface of said connector section.

3. (Previously Amended) The catheter of Claim 1 further characterized in that:

a) said port extends around more than 180° of the circumference of said passage section.

4. (Previously Amended) The catheter of Claim 1 further characterized in that:

a) said bolus body includes a longitudinally extending stiffening arch formed outwardly of said passage section opposite said port.

5. (Previously Amended) The blood vessel catheter of Claim 1 further characterized in that:

a) said bolus body has opposite sides bracketing said port which taper radially inwardly toward the longitudinal axis of said body as they extend forwardly from said passage section into said nose section.

6. (Canceled)

7. (Canceled)

8. (Previously Amended) The catheter of Claim 2 further characterized in that:

a) said bolus body has opposite sides bracketing said port which taper radially inwardly toward the longitudinal axis of said passage section as they extend forwardly from said passage section into said nose section.

9. (Previously Amended) The catheter of Claim 8 further characterized in that:

a) said port has a trailing edge at the outer periphery of said passage section;

b) said radially inward taper of said sides beginning forwardly of said trailing edge.

10. (Previously Amended) The catheter of Claim 1 further characterized in that:

a) said tube contains a single lumen and said passage section contains a single passage.

11. (Previously Amended) A bolus for a blood vessel catheter, comprising:

a) a generally cylindrical body having a longitudinal axis and including a connector section, a passage section and a nose section joined to said passage section;

b) said passage section containing a port opening radially outwardly through said body, transversely of said axis;

c) said passage section having a portion centered on said longitudinal axis and another portion which is, with said nose section, inclined to said longitudinal axis in the same radial direction as said port so that said nose section is displaced to one side of said longitudinal axis.

12. (Previously Amended) The bolus of Claim 11 further characterized in that:

a) said nose section has an unperforated, bullet nose thereon; and

b) one side of said bullet nose, adjacent a tip of said nose, is substantially tangent to an imaginary cylinder projected forwardly from the cylindrical outer surface of said connector section.

13. (Previously Amended) The bolus of Claim 11 further characterized in that:

a) said bolus body has opposite sides bracketing said port which taper radially inwardly toward the longitudinal axis of said body as they extend forwardly from said passage section into said nose section.

14. (Previously Amended) The bolus of Claim 13 further characterized in that:

a) said nose section has an unperforated, bullet nose thereon; and
b) one side of said bullet nose, adjacent a tip of said nose, is substantially tangent to an imaginary cylinder projected forwardly from the cylindrical outer surface of said connector section.

15. (Original) The bolus of Claim 14 further characterized in that:

a) said bolus body includes a longitudinally extending stiffening arch formed outwardly of said passage section opposite said port.

16. (Currently Amended) A catheter for insertion through a patient's vascular system, comprising:

a) a tube having a predetermined outside diameter and a distal end;
b) a bolus including a connector section, a passage section and a nose section, said connector section having a cylindrical outer surface and being connected to said distal end on a longitudinal axis of said tube and connector section;

c) said passage section containing an axially extending passage and a radially extending port which opens through the side of said bolus behind said nose section;

d) said nose section being joined to said passage section at the forward end of said passage section and having a bullet nose, the maximum cross-sectional diameter of said nose section where it joins said passage section being substantially less than said predetermined diameter;

e) said nose section having a longitudinal axis which extends through the tip of a bullet nose on said nose section and which is inclined from said longitudinal axis of said connector section and said nose section having an external surface portion which

is substantially tangent to an imaginary cylinder projected forwardly from the cylindrical outer surface of said connector section.

17. (Previously Amended) The catheter of Claim 16 further characterized in that:

a) said maximum cross-sectional diameter of said nose section where it joins said passage section being at least 25 percent smaller than the largest cross-sectional diameter of said passage section.